DOCUMENT RESUME

ED 326 033 EC 232 648

AUTHOR Gemma, Anna
TITLE Social Skills Instruction in the Mainstreamed Preschool Classroom.
PUB DATE 89
NOTE 52p.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Class Organization; *Disabilities; Interaction; *Interpersonal Competence; Mainstreaming; Peer Influence; Peer Relationship; Preschool Education; Program Design; Research Needs; *Skill Development; Social Behavior; *Social Development; Social Integration; Student Behavior; Teacher Influence; *Teaching Methods

ABSTRACT

This literature review considers research dealing with social skills instruction for handicapped preschool children in a mainstreamed or integrated setting. It offers a literature-based rationale for preschool mainstreaming, notes the fundamental objectives of preschool mainstreaming that relate to the process of socialization, and addresses the need for organization and structure in program design. Specific components necessary to enhance the social behavior and social skills development of handicapped preschool children are outlined, calling for a daily schedule which emphasizes direct social skills instruction and careful organization of environmental variables. The review also considers: (1) types of activities most conducive to positive social interactions between handicapped and nonhandicapped youngsters; (2) efficacy of activities with nonhandicapped children in preparation for the arrival of a handicapped child; (3) physical arrangement of the classroom; (4) grouping of children; (5) teacher influence; (6) use of teacher-mediated intervention; (7) peer-mediated intervention; and (8) research needs in this area. (49 references) (JDD)

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SOCIAL SKILLS INSTRUCTION IN THE MAINSTREAMED PRESCHOOL CLASSROOM

Anna Gemma

15 Bartlett Drive
Manhasset, N.Y. 11030

(516) 627-2811

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SOCIAL SKILLS INSTRUCTION IN THE MAINSTREAMED PRESCHOOL CLASSROOM

Since the enactment in 1975 of P.L. 94-142, the Education of All Handicapped Children Act, there has been a surge of interest in and respect for the education of exceptional preschool children in a mainstreamed or integrated setting. The establishment of mainstreamed early childhood intervention programs has been inspired by P.L. 94-142 which requires that all handicapped children between the ages of three and twenty-one be educated in the "least restrictive environment" according to their needs and abilities. Therefore, handicapped preschool children are currently being placed in regular education settings in order to "integrate them physically, instructionally, and socially with their nonhandicapped peers" (Burstein, 1986, p. 425).

This review of the literature will consider research dealing with social skills instruction for handicapped preschool children in a mainstreamed or integrated setting. The term **preschool children** will refer to youngsters between three and five years of age. The term **handicapped** will be used to describe exceptional children with a variety of conditions, including emotional and behavioral disorders, learning disabilities, mental retardation, physical disorders, visual and hearing impairments, and socialization and communication disorders. With respect to the placement of exceptional children, some special educators make a distinction between the concepts of **mainstreaming** and

integration. For example, according to Odom and Speltz (1983), in the **mainstreamed** preschool setting, handicapped children participate in a program which was originally devised for nonhandicapped children. In this case, the handicapped children make up less than half of the class register. On the other hand, Odom and Speltz (1983) consider that an **integrated** preschool program is one that has been planned essentially for handicapped children. In this case, the handicapped children account for more than half of the participants. However, in studies which deal with the education of the handicapped and the nonhandicapped in a common environment, most researchers do not differentiate between **mainstreaming** and **integration.** For the purposes of this review of the literature on the subject, the terms **mainstreaming** and **integration** will be used interchangeably.

Educators in the field of special education have carefully considered the benefits of mainstreaming for both the handicapped and the nonhandicapped child. The rationale for preschool mainstreaming is frequently reported in current educational research. For example, from a "social-ethical" perspective, Bricker (1978) asserts that nonhandicapped children have the opportunity to test and reevaluate the negative attitudes which they may have about the handicapped when they participate in a mainstreamed program at school. On the other hand, Bricker (1978) adds that when normally-developing children do not have contact with handicapped children, the result may very well

be a reaffirmation of these negative perceptions. In addition, from a "psychological-educational" standpoint, Bricker (1978) explains that since a mainstreamed preschool setting more closely approximates the heterogeneous out-of-school environment, the young handicapped child will be better prepared to function in society-at-large as a result of having interacted with nonhandicapped children at school. Similarly, Cavallaro (1980) states that when exceptional preschool children are educated "in the social and educational mainstream" (p. 364), they begin to develop the skills they will need in order to be active, productive citizens when they reach adulthood.

Guralnick (1986) presents additional reasons to justify preschool mainstreaming. In a discussion of the comparative responsiveness of young children in mainstreamed and segregated settings, he states that research suggests that normally developing preschoolers "in mainstreamed settings will be more responsive to the social bids and social interactions of handicapped children than in settings containing only handicapped children" (p. 22). Furthermore, Guralnick (1986) explains that handicapped youngsters in a segregated environment typically exhibit a marked reluctance to relate to their peers, and that, when these youngsters do attempt a social overture, the likelihood that they will succeed in receiving a satisfying response is generally quite low. Strain and Cordisco (1983) add that, due to the limited number of socially receptive peers available, developmentally-delayed children in segregated

preschool classes often do not have the opportunity to learn and practice social skills. On the other hand, Guralnick (1986) indicates that when these handicapped preschoolers are integrated with nonhandicapped youngsters, the incidence of their initiating social interactions and of receiving responses to social overtures increases remarkably, particularly when the program includes "explicit peer-mediated training activities" (p. 26). Strain (1984b) concurs that, in the mainstreamed environment, the handicapped child is more likely to have the occasion to learn by modeling, to make social overtures, and to experience the social responsiveness of his classmates. In addition, many proponents of preschool mainstreaming contend that "mainstreamed environments will be richer, more challenging, and more stimulating than specialized settings" (Guralnick, 1986, p. 26), and that, as a consequence of these enriching and challenging experiences, progress occurs at a faster pace than in segregated settings. For example, Smith and Strain (in press) have found that the young child's social and language development are enhanced in a mainstreamed milieu. Dunlop, Stoneman, and Cantrell (1980) conclude that studies which point to the deleterious effects of segregated class placement on the social and emotional growth of the exceptional child have motivated the creation of integrated preschool programs.

In general, the basic philosophy, curriculum content, and teaching methods of most early childhood education programs make the preschool classroom the ideal place to begin

mainstreaming handicapped children. Teachers of young children acknowledge that, within the preschool population, there is a wide range of differences in terms of ability and level of development. Therefore, the course of study and methods of instruction must naturally be adapted to suit individual differences in preferred learning style and in rate of progress. Indeed, according to O'Connell (1986), the basic philosophy of most preschool classrooms is derived from Piaget's theory of development, in which "each child is encouraged to interact with the materials in the environment, as well as the other children, in order to acquire new developmental skills by trial and error and imitation" (p. 166). The young exceptional child can benefit from participating in this type of environment where each child is encouraged to progress according to his own rate and level of development.

The fundamental objectives of preschool mainstreaming relate to the process of socialization. Indeed, the mastery of acceptable social skills and behaviors is a major developmental task of all young children. However, handicapped preschool children often exhibit a deficiency in the acquisition of social interaction skills, including skills of initiation and response. According to Strain (1984b), social skill deficits, peer rejection, and few friendships are characteristic of many handicapped children. In addition to effecting peer rejection, isolation in special classes, and a poor self-image, Strain and Kohler (in press) contend that "social deficits in childhood

inhibit cognitive development, predispose children to delinquency, sexual dysfunction, and adult conduct problems, and generally promote immature and aggressive solutions to adult problems in living."

The young exceptional child typically exhibits certain patterns of behavior which cause his at-risk status for poor social relationships. Strain (1984b) explains that exceptional preschoolers often do not engage in social overtures, such as paying a verbal compliment or sharing a possession, which might endear their nonhandicapped peers to them. As a result, the normally-developing children are frequently not motivated or inclined to interact with the handicapped children (Strain, 1984b). In addition, Strain (1984b) states that, even when normally-developing preschoolers do make social overtures, the developmentally-delayed children often do not respond. As a result, the normally-developing children often stop trying to communicate with the handicapped children (Strain, 1984b). Finally, Strain (1984b) contends that handicapped youngsters frequently fail to comprehend the social cues of their peers, and, therefore, they may react in a way that is considered strange and inappropriate by the nonhandicapped children.

In a well-designed study, Strain (1984a) used both observational and sociometric techniques to compare social relationships between handicapped and nonhandicapped preschoolers. In addition, Strain (1984a) assessed the patterns of social interaction within pairs of normally-developing

children and pairs of exceptional children. The one hundred forty subjects in this study were between thirty-eight and fifty-six months of age and came from ten different mainstreamed preschool programs. Sixty-eight of the youngsters were nonhandicapped and demonstrated normal cognitive, behavioral, and social development. The other seventy-two youngsters had severe handicaps including mental retardation and autism. These handicapped children displayed very limited communication skills, rarely took part in appropriate social behavior without a great deal of adult intervention, and exhibited numerous negative behaviors, such as temper tantrums and task avoidance, which discouraged the development of social and cognitive skills. The children were observed over a fifteen-day period and were assessed with respect to eight types of positive behavior. These behaviors included 1) a Reward-Related Activity in which one child's behavior or social overture effected the success experience of another child, 2) a Complimentary Verbal Statement, 3) a Play Organizer strategy in which a child designated an activity, a role, or the rules of a game for his classmates, 4) a Share gesture in which one child offered or traded a toy with another child or where the two children played together with a toy, 5) a Physical Assistance overture, 6) a mutually enjoyable Rough and Tumble Play experience, 7) a display of Affection, and 8) Conflict Resolution behavior where one child verbally presented a solution to a dispute. In addition, the children were observed for two types of antisocial behavior

including a Negative Motor-Gestural action, such as kicking or hitting, and a Negative Vocal-Verbal action, such as calling names, shouting, or screaming. With respect to the social relationships and patterns of social interaction between handicapped and nonhandicapped children, this study by Strain (1984a) suggests that nonhandicapped youngsters are more likely to select other nonhandicapped peers of the same age and sex for friends. Moreover, Strain (1984a) determined that nonhandicapped children demonstrated many more behaviors exemplifying a Reward-Related Activity, Complementary Verbal Statement, Play Organizer strategy, and Share gesture toward nonhandicapped children than to handicapped children. On the other hand, Strain (1984a) found that nonhandicapped youngsters expressed more offers of Physical Assistance, Affection, and Conflict Resolution to handicapped children than to nonhandicapped children. Furthermore, according to Strain (1984a), the nonhandicapped children frequently received responses to social initiations from their nonhandicapped peers but rarely received such responses from the handicapped children. The nonhandicapped children in this study also initiated many more positive social behaviors toward other nonhandicapped children than did the handicapped children. Finally, the nonhandicapped children responded in a socially acceptable manner to an equal number of social overtures from both handicapped and nonhandicapped children. This study by Strain (1984a) is noteworthy because of the comparatively large subject sample

from a variety of settings and because of the combined advantages of observational and sociometric devices. The findings of research studies such as this one which describe the social skill deficits of handicapped preschool children and the resulting relationships and patterns of social interaction between handicapped and nonhandicapped children have important implications for those educators who plan the curriculum content and method and materials of instruction for mainstreamed preschool programs.

Although a review of educational research reveals a strong rationale for preschool mainstreaming, it should be noted that studies consistently indicate the need for organization and structure when designing a mainstreamed preschool program. According to Allen (1980), the benefits of social interaction and integration will not be realized by merely placing handicapped and nonhandicapped children together in the same environment. Vaughn (1985) explains that, in order to help handicapped children overcome social skill deficits, the teacher must structure social interactions with nonhandicapped children. Raver (1979) agrees that specific instructional procedures are necessary to "facilitate cross peer interaction" (p. 23). Without the implementation of carefully planned teaching strategies, the young handicapped child in an integrated preschool classroom may very well experience isolation along with an inordinately slow rate of progress (O'Connell, 1986).

A study by Jenkins, Speltz, and Odom (1985) emphasizes

the importance of structure and organization if maximum benefits are to be derived from a mainstreamed preschool program. These researchers compared the effects of integrated and segregated preschool programs at a university-sponsored laboratory school, with respect to cognitive, language, motor, and social development, when children are simply enrolled in classes and no special training methods are implemented. Forty-four preschool children between the ages of three and six participated in this one-year study. Thirty-six of the children were handicapped and had been classified as "developmentally delayed" with mild to moderate mental handicaps, communication disorders, behavior disorders, orthopedic disorders, and visual impairments. Seven of the forty-four participants were nonhandicapped children whose parents had volunteered their participation in the study.

In designing this study, Jenkins, et al. (1985) wisely chose a large time sample and took great care to control as many of the variables as possible in order to achieve authentic results. Children were assigned at random to treatment (integrated) and control (segregated) groups. To develop experimental and control groups of similar composition, a special matching procedure was devised involving the handicapped children. Based on the results of a screening interview, the handicapped children were rated in four areas, including cognitive, language, social, and motor development, ranked in order of their level of development, and randomly assigned to an integrated or segregated class in order of their developmental

rank. Moreover, other factors were carefully considered to effect a meticulous control of the variables. For example, both the treatment and control groups were comparable with respect to teacher-pupil ratio, the number of staff members on the support team, the physical organization of the classroom, the order of daily class activities, play equipment and materials, as well as style of teaching. With respect to teacher preparation, the teachers were carefully informed about the nature and purpose of the study. They were specifically instructed not to encourage the nonhandicapped children to act as models for the handicapped children nor to encourage the handicapped children to imitate the nonhandicapped children.

A plan for making "before and after" comparisons of integrated and segregated settings was instituted. A series of standardized tests was administered on a pretest and posttest basis to evaluate cognitive, language, and motor development. Peer interactions were judged by means of direct observation during free play periods. These assessment procedures revealed that all children in both types of programs made considerable progress during the year (Jenkins, et al., 1985). However, according to Jenkins, et al. (1985), neither the integrated nor the segregated setting proved to produce greater gains for the handicapped child. On the basis of results of post-year assessment measures, these researchers reported no significant differences between the handicapped children in the integrated setting and those in the segregated setting in terms of

cognitive, language, and fine motor skills. It was only in the area of social play that they found that the handicapped children in the integrated setting achieved significantly higher scores. However, the researchers caution the reader against concluding that mere proximity to nonhandicapped children in an integrated setting will result in advances in social skill development for handicapped children. Rather, they indicate that the assessment procedures used in this study evaluated only one, very limited facet of peer interaction. These researchers assert that informal integration does not necessarily improve the social skills of handicapped children, but instead it merely provides the occasion for them to practice social skills they had previously developed. The results of this study by Jenkins, et al. (1985) suggest that, in the absence of careful planning to actively enhance interactions with nonhandicapped children, the informal placement of handicapped children in an integrated setting does not make a significant difference in their overall progress. However, when curriculum content and classroom organization are carefully structured to enhance social interaction between children in an integrated environment, progress in the cognitive and social development of the exceptional child is more likely to occur (Jenkins, et al., 1985).

Similarly, a study of "partial integration" of handicapped children in a regular preschool setting by Peck, Palyo, Bettencourt, Cooke, and Apolloni (1988) supports the need for

careful planning and organization of mainstreamed preschool programs. Four preschoolers with mild to moderate handicaps and ten normally-developing preschoolers were observed in a public school setting during integrated free play activities to determine the effects of informal contact between handicapped and nonhandicapped children. A "frequency recording system" (Peck, et al., 1988, p. 2) was developed to determine the rate of positive social interaction, negative social interaction, and imitation of the nonhandicapped children. Each child was evaluated during twenty-one observation sessions over a period of six weeks. The results of direct observation procedures revealed more than twice the number of positive social interactions between nonhandicapped children as between handicapped and nonhandicapped children (Peck, et al., 1988). In addition, anecdotal records indicated that the handicapped children in this study were often isolated and excluded from most of the social activities between nonhandicapped children unless teachers intervened. Peck, et al. (1988) conclude that "it appears that if anticipated benefits are to be derived from this type of 'partial integration' arrangement, educators must be prepared to undertake specific interventions to achieve them" (p. 3). Although the results of this study are based on observations of a small sample of the preschool population, the findings are consistent with and support the conclusions of other research studies based on larger population samples. The observations are particularly valuable when one considers

that, although many such studies have been conducted in a model or laboratory school environment, this study by Peck, et al. (1988) took place in a naturalistic public school setting.

Studies which assess and compare the development of social skills of handicapped and nonhandicapped youngsters in a highly structured setting also point to the importance of carefully planning and organizing mainstreamed preschool programs. Dunlop, Stoneman, and Cantrell (1980) conducted such a study at a Demonstration and Research Center for Early Education model school. Six exceptional and six normally-developing children took part in a year-long program which included a carefully structured curriculum based on a hierarchy of skills, a predictable and established daily routine, and positive reinforcement to effect behavior modification. To encourage independence, positive reinforcement was gradually faded over time. Moreover, the program emphasized a positive self-image and respect for individual differences. In addition, as a result of daily planning and evaluation, each day's objectives were studied, reevaluated, and modified as necessary. Children's behavior was assessed, by means of observational and sociometric procedures, in the areas of solitary activity, direct interaction/dominant, direct interaction/cooperative, and adult-child interaction (Dunlop, et al., 1980).

Significant changes were noted by Dunlop, et al. (1980) for both groups of children in the amount of time spent in each of the four categories of behavior during the course of the

study. For example, as the year went on, the handicapped children spent less and less time involved in solitary activities, whereas the nonhandicapped children spent less time at first and more time later on in solitary activities. Although the nonhandicapped children generally spent more time in cooperative interaction than the handicapped children, over time both groups became more alike in this respect. Moreover, both groups readily engaged in social interaction with peers by the end of the study. Finally, the total number of social interactions of handicapped children with all other children increased, whereas the total number of social interactions of the nonhandicapped children decreased, so that by the end of the school year, both groups were quite similar with respect to the number of social interactions in each of the categories of behavior targeted for observation. Based on these results, Dunlop, et al. (1980) concluded that "one school year's participation in a structured, integrated preschool setting made these handicapped children more like the nonhandicapped children in their social interaction than they were at the beginning of the instructional period" (p. 140).

The major emphasis in research dealing with the planning and organization of an effective mainstreamed preschool program concerns the specific components which are necessary to enhance the social behavior and social skills development of handicapped youngsters. The literature is replete with studies that investigate the teacher, child, and environmental variables

that correlate with successful mainstreaming. Among the factors which Strain (1984b) considers to be instrumental in improving the social relationships of exceptional preschool children are environmental factors such as play materials and activities, teacher-mediated intervention in the form of prompting and reinforcement of social behavior, and peer-mediated intervention where nonhandicapped youngsters are trained to serve as models for, initiate social encounters with, and reinforce the social responses of handicapped children. It will be the purpose of the next section of this review of the literature about preschool mainstreaming to discuss research studies which investigate the components of effective social skills instruction in the mainstreamed preschool classroom. The specific components to be discussed include curriculum content and the selection of target social skills, the scheduling of social skills instruction, environmental variables such as play equipment and the physical arrangement of the classroom, and instructional strategies in the form of teacher-mediated and peer-mediated intervention.

According to Strain and Cordisco (1983), when selecting curriculum objectives for the mainstreamed preschool program, it is of paramount importance to consider those skills which will ensure frequent positive social experiences and which will increase the likelihood of favorable social adjustment during the transition from the preschool classroom to the kindergarten and first grade levels. Similarly, Odom and Strain (1985) point

out that it is important to choose those social skill behaviors which are most likely to achieve a favorable response from a classmate or which are needed to sustain ongoing social interaction. However, Strain and Cordisco (1983) have found that handicapped preschool children are more often deficient in social and survival skills than in language or academic readiness skills. Nevertheless, although academic objectives are predictably included in curriculum models for mainstreamed preschool programs, skills of social ability and classroom deportment are frequently excluded (Strain & Cordisco, 1983). With respect to social skill objectives for severely handicapped children, Odom and Strain (1985) advise that basic social behaviors which necessitate only limited language ability and which foster satisfying social interaction are important social skills to develop. Among the social skills which Strain and Cordisco (1983) believe to be vital in effecting favorable social relationships are sharing toys and equipment, making social overtures to classmates, quickly responding to the social overtures of others, displaying physical affection, cooperative play, and helping peers. Such social skills, according to Odom and Strain (1985), have merit because they encourage favorable social exchanges between handicapped and nonhandicapped children. However, Odom and Strain (1985) add that some handicapped children exhibit negative responses to social initiations by peers, which may abruptly result in the termination of a social interaction and discourage future positive relationships with

peers. Therefore, these researchers assert that it is essential to include curriculum objectives which are designed to decrease the number of negative social responses of handicapped youngsters and which are likely to enhance the quality of their social relationships.

Furthermore, certain skills in classroom decorum must be included in the curriculum model in order to encourage positive experiences at both the preschool level and during the early elementary grades (Strain & Cordisco, 1983). These skills include the ability to ask questions so that rules and assignments will be understood, to engage in actions which result in positive teacher reinforcement, to undertake simple academic and social tasks with a minimum of teacher intervention, and to understand and comply with teacher commands (Strain & Cordisco, 1983).

Odom and Strain (1985) suggest that teachers of mainstreamed preschool classes schedule direct instruction in social skills on a daily basis. Moreover, they assert that teachers should carefully consider and plan the objectives, activities, and assessment procedures which they apply in these instructional periods. These researchers also explain that children should be given ample opportunity during the course of the day to practice social skills in a variety of contexts and to apply and generalize what they have learned to other settings. The free play period provides an ideal occasion for the children to practice social initiations and responses and for the teacher

to further develop these social skills and institute specific training procedures (Strain & Odom, 1985). Furthermore, during free play activities, the teacher can assess the children's social skill development and their application of these skills in a variety of situations (Strain & Odom, 1985).

In addition to a well-structured curriculum and daily schedule which emphasize direct social skills instruction, careful organization of environmental variables, including the physical arrangement of the classroom, the selection of play activities and equipment, and group composition contribute to a more effective program. Raver (1979) makes the point that "teachers can arrange certain aspects of their classrooms to maximize the positive outcomes of an integrated setting" (p. 26).

Honig and McCarron (1988) investigated the types of activities which are most conducive to positive social interactions between handicapped and nonhandicapped children. Using a time sampling procedure, these researchers observed ten normally-developing children and five exceptional children at a mainstreamed preschool. The children had been together in the same classroom for two months when the observations were initiated. Each child was studied for two ten-minute sessions in each of four kinds of activities for a total of eighty minutes of observation during a period of six weeks. The observers recorded the incidence of six types of positive social behavior (sharing, helping, nurturing, cooperating, sympathizing, and

praising) during free play/unstructured playtime, circle time, structured play, and gym. In free play/unstructured playtime, children were presented with a variety of toys and play equipment and engaged in self-directed play activity with only a small amount of teacher intervention. Circle time was a structured teacher-directed activity designed to develop listening skills. Children answered questions and took turns performing designated tasks. In structured play, all pupils participated in three teacher-planned activities on a rotating basis. The teacher actively intervened to encourage pupil interaction. Gym was an unstructured play period during which children could move around freely and play with equipment designed to develop gross motor skills. Teachers were available to supervise and make suggestions, but did not engage in direct instruction. Honig and McCarron (1988) report that positive social behaviors were most frequently observed during free play/unstructured playtime, but that many positive social behaviors were also noted during structured play and gym. The prosocial behaviors most often observed during each of these types of activities were sharing, helping, and cooperation. On the other hand, the lowest incidence of positive social behavior occurred during circle time, a structured teacher-directed activity during which the children were required to pay strict attention to the teacher's lesson and directions (Honig & McCarron, 1988). Thus, the results of this study by Honig and McCarron (1988) suggest that positive social interaction is not encouraged during teacher-dominated

activities. Moreover, "personal-social interactions must be specifically planned for, facilitated by, and modeled by teachers and therapists in order to enhance the social skills and mental health of atypical preschoolers" (Honig & McCarron, 1988, p. 123).

Several studies have been conducted to ascertain the efficacy of pre-enrollment activities initiated with groups of normally-developing youngsters in preparation for the arrival of a handicapped child. Raab, Nordquist, and Cunningham (1986) conducted such a study to determine the effect of pre-enrollment activities on normally-developing preschoolers' acceptance of an autistic child. A series of twenty activities was introduced to an experimental group of six normally-developing youngsters prior to the arrival of the autistic child. These pre-enrollment activities were designed to teach the children about similarities and differences of people in general, about various types of handicapping conditions, and about autism in particular. A control group of twelve other normally-developing youngsters at the school did not participate in any special activities. Teachers observed and kept anecdotal records of interactions with and attitudes toward the autistic child by the children in both the experimental and control groups for a period of two weeks. In addition, sociometric procedures were implemented at the conclusion of the two-week period. Raab, et al. (1986) determined that the two groups differed significantly in their general attitude and behavior toward the autistic child.

They found that, although the children in both groups demonstrated a minimum of unfavorable behaviors toward the autistic child, the children in the experimental group interacted with the autistic child, spoke politely to her, offered her assistance, and acknowledged her accomplishments with greater frequency than did the children in the control group. Moreover, according to Raab, et al. (1986), during sociometric testing, the children in the experimental group stated that the autistic child was a friend more often than the children in the control group. It might be noted that Raab, et al. (1986) advise educators to use caution in applying these results to the general preschool population because of the small subject sample of this study. They state that the inclusion of more nonhandicapped children and children with a wider variety of handicapping conditions would improve the applicability of this study to other children and other settings.

On the other hand, Vandell, Anderson, Ehrhardt, and Cunningham (1982) report negative results of a training program designed to enhance the acceptance of deaf classmates by normally-developing youngsters. In this study, half of the nonhandicapped children at a mainstreamed nursery school took part in a three-week training program which involved discussions about the concept of deafness, occasions to practice techniques of effective interaction with deaf people, and the opportunity to engage in free play activities with deaf children. The remaining nonhandicapped youngsters at the school received no

special training. Prior to the training sessions, the experimental and control groups were judged to be compatible in terms of frequency, duration, and types of interaction with deaf children. However, according to Vandell, et al. (1982), the expected outcome of improved social integration with deaf peers by the experimental group was not realized. These researchers noted that:

> Hearing treatment children began interacting significantly less with the deaf children than did the hearing control children. Hearing treatment children also became less responsive to the deaf children's attempts to interact than were hearing control children. While it was hypothesized that increased exposure would result in hearing treatment children using more gestures, touches, and messages incorporating multiple modalities, they came to use significantly fewer of these acts than did the hearing control children. (Vandell, et al., 1982, p. 1354)

In evaluating these results, Vandell, et al. (1982) consider that the deaf children's inability to speak and a lack of knowledge of sign language on the part of both the hearing and the deaf children might explain in some measure the failure of the training program. They also hypothesize that more favorable results might have been achieved if the training program had been undertaken in a "less forced setting" (p. 1362). Vandall, et al. (1982) add that the critical objective in

changing the negative attitudes of hearing children toward deaf children may be to develop within the hearing children an appreciation of the value of relating to deaf peers.

The physical arrangement of the mainstreamed classroom also has a significant impact on social skills instruction. According to Odom and Strain (1985), when organizing the physical environment, teachers should place pertinent learning materials where they can be easily viewed, identified, and manipulated. However, they advise the removal of any unnecessary play equipment to avoid the possibility of distraction. Moreover, these researchers have found that reducing or limiting the number of materials and amount of equipment available for an activity actually stimulates the need for sharing with peers and for social interaction. In addition, Odom and Strain (1985) have determined that it is often desirable to carry out social skills instruction in a small part of the classroom because the greater concentration of children in the smaller area is likely to encourage social interaction. However, they caution that using too small an area can negatively affect positive social behavior if the children are not free to move around without bumping into one another or accidentally upsetting ongoing projects.

The availability of certain types of toys and other play materials also has an important role in social skills instruction and social integration. Odom and Strain (1985) indicate that by selecting toys of great social value to the children, the teacher furnishes them with a vehicle for achieving effective

social skill development. These researchers have found that specific types of toys have particular appeal for children at various stages of development, and they caution that toys which may be of interest to a normally-developing child of a certain age may not have social value for a handicapped child of the same chronological age. However, they advise that at times developmentally-delayed youngsters should be encouraged to use toys which are normally of interest to children of their chronological age rather than their developmental age so that they can relate successfully to the nonhandicapped children in an integrated setting. According to Odom and Strain (1985), the introduction of too many new toys into the learning environment can also influence the amount of ongoing social interaction. When a new toy is first presented to children, their initial fascination with it may inhibit its value for enhancing social interaction, and it is only after the novelty of the toy has subsided that the toy becomes a vehicle for social skills development (Odom & Strain, 1985). Therefore, Odom and Strain (1985) advise that it is important to limit the number of new toys available at any one time so that the children's preoccupation with novel play materials is not prohibitive to social interaction.

The grouping of children for social skills instruction is another significant factor in achieving favorable interaction. According to Bricker and Bricker (1977), children should be matched in groups by level of development rather than by

chronological age so that positive social experiences will result. Similarly, after observing numerous successful play periods between children, Raver (1979) asserts that, in general, children would rather play with other children who are performing at a level of development which is quite similar to their own. Therefore, she believes that, when grouping children for social skills instruction, careful consideration should be given to their "developmental similarity" (p. 23) rather than to their chronological age. After studying the patterns of social interaction between nonhandicapped and developmentally-disabled preschoolers, Strain (1984a) made observations which confirm Raver's ideas about friendship choices between normally-developing and exceptional youngsters. Strain (1984a) found that nonhandicapped children usually choose handicapped children who are older than they are and who are more advanced emotionally, socially, and cognitively than are the handicapped children of their own age group. Strain (1984a) explains that, in choosing older handicapped children as friends, a "closer developmental-match" (p. 25) is achieved. He considers that "similar developmental level is a strong predictor of successful and prolonged communication" (p. 25) between young children. With these factors in mind, Strain (1984a) suggests that designers of preschool programs create the occasion for more frequent friendship choices between handicapped and nonhandicapped youngsters by enrolling handicapped children who are chronologically older than the nonhandicapped peers.

On the other hand, Guralnick (1981) reports findings that question the value of homogeneous grouping by level of development. In a study to determine the influence of group composition on the social behavior of mainstreamed preschoolers, Guralnick (1981) assessed the social interactions, complexity of play, and social participation of thirty-seven handicapped and nonhandicapped youngsters. The subjects were assigned in equal numbers to play groups which were either homogeneous or heterogeneous with respect to level of development. Related variables, including adult-child ratio, type and number of toys available, and teaching style and methodology, were carefully controlled to establish group composition as the major factor influencing change in social behavior. Analysis of observations during free play revealed that "the only significant effect of group composition on children was reduced inappropriate play by severely delayed youngsters while interacting in heterogeneous play groups" (Guralnick, 1981, p. 115).

Special educators interested in grouping for effective social integration have also studied the question of the ideal ratio of handicapped children to nonhandicapped children in a mainstreamed environment. In general, research does not give a precise answer to this question. However, Blacher-Dixon, Leonard, and Turnbull (1981) have found that when only one or two handicapped children are mainstreamed into a regular preschool classroom, isolation of the handicapped children often results, atypical traits of handicapped children are emphasized,

and a stereotyped opinion of handicapped children is encouraged. However, they have observed that when several handicapped youngsters are mainstreamed into one classroom, the nonhandicapped children have the opportunity to appreciate the handicapped children as individuals.

The teacher plays a crucial role in fostering social integration in a mainstreamed preschool classroom. The effect of teacher attitudes and strategies on social interaction between handicapped and nonhandicapped children is frequently discussed in current educational research. For example, Brophy and Hancock (1985) conducted a study to evaluate teacher interactions with normally-developing and developmentally-delayed youngsters. Four free play periods in each of two twelve-week sessions were video-taped to ascertain the nature of teacher-child interactions. Brophy and Hancock (1985) determined that questioning was the strategy most often used by teachers when interacting with both types of children. However, these researchers found that teachers asked many more questions of the handicapped children. In addition, they discovered that most of the questions asked of the handicapped children were of a closed type, requiring a one word or yes or no response. On the other hand, Brophy and Hancock (1985) observed that teachers were more willing to give explanations to normally-developing youngsters, answered their questions more often, and were more likely to engage in free, open-ended conversations with them. However, these researchers observed

that teachers gave more commands and directions to the handicapped children. According to Brophy and Hancock (1985), this differential treatment of handicapped children inhibits the development of social interaction skills to some degree. Therefore, special training programs must be designed to help teachers avoid relating to exceptional children in a stereotyped manner (Brophy & Hancock, 1985).

In a later article, Brophy and Hancock (1988) state that teachers tend to underestimate the essential similarities of handicapped and nonhandicapped children. They contend that all children share certain basic needs, and that, therefore, teachers should consider that principles of effective instruction used in educating normally-developing youngsters apply to exceptional children as well. This point has a great deal of validity and significance when one considers the basic objective of P.L. 94-142, namely, to educate all handicapped children in the "least restrictive environment," and in light of the consensus among educators today that there are more similarities among handicapped and nonhandicapped children than there are differences.

Moreover, Brophy and Hancock (1988) contend that some teacher behaviors in common practice can actually discourage pupil interaction. For example, they noted that handicapped children relate more often to teachers than to classmates and

that the "initiation of social contact" (p.111) typically comes from the teachers. In addition, these researchers observed that the increased frequency of teacher-initiated interaction resulted in a lower rate of interaction between the handicapped child and his nonhandicapped peers. Thus, there is a "potential negative impact of teacher presence on peer interaction" (Brophy & Hancock, 1988, p. 111). Indeed, it seems reasonable to expect that when teacher interaction is always readily available, handicapped youngsters will not have as great a need to relate to nonhandicapped peers. The implication of these findings is that teachers should avoid excessive interaction with exceptional youngsters that interrupts or precludes their relating to other children. Rather, Brophy and Hancock (1988) suggest that teachers devote their efforts to structuring activities which will increase the likelihood of successful social experiences for the handicapped child, to training the nonhandicapped youngsters in techniques of positive social interaction, and to directly prompting and reinforcing the social initiations and responses of both the handicapped and the nonhandicapped children.

Numerous studies have been conducted to ascertain the efficacy of teacher-mediated intervention in the form of prompting and reinforcement. For example, Peck, Appolloni, and Raver (1978) found that teacher prompts and social reinforcement can be beneficial in promoting imitation by retarded youngsters of the favorable free play behavior of their

nonretarded peers. By directly prompting and reinforcing social initiations and responses, teachers can successfully intervene to promote social interaction between normally-developing and developmentally-delayed youngsters (Odom & Strain, 1985). According to Odom and Strain (1985), with respect to prompting, optimal results can usually be achieved with handicapped children by initially introducing a verbal prompt (a simple command or direction) and then by confirming the verbal prompt with a physical prompt (for example, by gently extending the arm of the child in a gesture of friendship to a peer). Once this technique is established, the teacher then increases the length of time between the verbal and the physical prompts in order to encourage the child to learn to respond to the verbal prompt alone (Odom & Strain, 1985). As the children repond positively to this strategy, the teacher presents some type of reinforement, such as a tangible reward or verbal praise (Odom & Strain, 1985). Although it is generally acknowledged that reinforcement should take place immediately following the performance of the targeted behavior, Odom and Strain (1985) caution that, since it is the actual social exchange that is the desired outcome, the teacher may have to temporarily withhold reinforcement in order not to interrupt a social interaction between children.

Fox, Shores, Lindeman, and Strain (in press) studied the effects of teacher prompting and reinforcement on the social initiations of three socially withdrawn youngsters in a university-affiliated preschool setting. The children were

observed during free play activities and their social overtures and corresponding peer responses were recorded sequentially. Teacher intervention, including verbal and physical prompts and positive reinforcement in the form of praise, was also noted. To enhance accuracy of findings, two observers were designated to study a particular subject during a given free play session. For purposes of comparison, an experimental design was established that included baseline, withdrawal, and follow-up phases. During these times, no deliberate attempt was made by the teachers to intervene in pupil interactions. During the baseline phase, teachers carried on with their usual routines for free play activities and, during the withdrawal and follow-up phases, teachers ceased all efforts at intervention and reverted to baseline methodology. Furthermore, a "response-dependent fading" procedure (Fox, et al., in press) in which there was a "systematic fading of teacher prompting and praising" (Fox, et al., in press) was also instituted. Consistency and objectivity of observations was achieved by providing teachers with a list of definitions and examples of child behavior to be studied. These behaviors included verbally organizing play, sharing, assisting, expressing negative responses, and engaging in extended interactions. After reviewing the observations made during the free play sessions, Fox, et al. (in press) concluded that the incidence of social initiations by the handicapped children increased as a result of teacher prompts and praise and that peers generally responded positively to

these initiations. In addition, they found that the frequency of extended interactions by the handicapped children with peers also increased. On the other hand, Fox, et al. (in press) noted that with the "abrupt, complete removal of teacher prompting," the incidence of social interaction involving handicapped children suddenly decreased. However, it is interesting to note that when the "response-dependent fading" procedure was instituted, the increased incidence of social interaction of these children was sustained (Fox, et al., in press). In addition, two and a half months later, during a follow-up phase when all teacher intervention was eliminated, the social interaction of those handicapped children who had experienced the "response-dependent fading" procedure continued to be above baseline levels (Fox, et al., in press). This study is particularly noteworthy because it indicates the maintenance of a favorable change in behavior over time.

A study by Odom, Hoyson, Jamieson, and Strain (1985) examined the comparative effectiveness of teacher prompts and token reinforcement in motivating nonhandicapped children's social interaction with three handicapped school-aged peers. After a baseline level of social interaction was determined, an intervention procedure consisting of five twenty-minute training sessions was implemented with three normally-developing youngsters to encourage social initiations, including play organizer, share, share request, assistance, affection, and complimentary statement strategies. During these training

sessions, the teacher first described and then, with the help of another adult, modeled the desired behaviors for the children. Next, the children practiced the desired behaviors with the second adult. Finally, the teacher instituted a token reinforcement system in which the nonhandicapped child was rewarded with a "happy face" every time he succeeded in getting a response to a social initiation. As a result of participation in these training sessions, the frequency of social initiations by the nonhandicapped children to their handicapped peers increased, as did the general level of social interaction (Odom, et al., 1985). According to Odom, et al. (1985), the comparative benefits of teacher prompting as opposed to token reinforcement in effecting this outcome are indicated by the fact that when the token reinforcement system was eliminated, there was no obvious regression in the quality of social interactions between the handicapped and nonhandicapped children. However, these researchers found that when teacher prompts to the nonhandicapped children were markedly reduced, there was a corresponding decline in the social interactions of the handicapped children. It is interesting to note that when teacher prompts were later reestablished, the favorable level of social initiations and positive interaction between the children was similarly restored (Odom, et al., 1985). This study emphasizes the crucial role of the teacher in encouraging the social development of handicapped children.

In addition to teacher-mediated intervention, peer-mediated

intervention, in which nonhandicapped children serve as models for or are directly trained to effect a positive change in the social behavior of their handicapped classmates, is most valuable in generating social integration. This aspect of social skills intervention is discussed at length in current research on the subject of preschool mainstreaming. In a discussion of the comparative benefits of peer-mediated intervention, Strain, Jamieson, and Hoyson (1986) assert that "peer interventionists have been successful in building skills in their peers that better generalize to new settings and maintain across time" (p. 252) and that nonhandicapped peers "can provide one-to-one instruction to disabled peers that would not be possible with an adults-only model of intervention" (p. 252).

Strain and Odom (1986a) discuss proximity intervention, one type of peer-mediated instruction. According to Strain and Odom (1986a), during proximity intervention, socially advanced children are grouped with socially disabled classmates and are asked to play with them, get them to respond, and teach them how to play. These researchers add that, in this type of peer-mediated intervention, the socially advanced youngsters are not given any specific training for enhancing the social interaction of the socially deficient children. Instead, the rationale for proximity intervention is based upon the conviction that "a natural transmission of social skills from one group of individuals to another through direct social interaction with more socially competent peers" (Strain & Odom, 1986a,

p. 11) will result.

Federlein, Lessen-Firestone, and Elliott (1982) considered the significance of proximity intervention in enhancing "the level, complexity, and initiator of play behavior" (p.245) of mainstreamed handicapped children. Forty-five handicapped and nonhandicapped children of diverse ethnic and racial backgrounds took part in this study. The handicapped subjects were diagnosed with emotional disorders and with hearing and other physical impairments. The nonhandicapped subjects were chosen at random from the entire nonhandicapped population of public and private preschools in southeastern Michigan. The children were assigned to either a handicapped segregated group or a handicapped/ nonhandicapped mainstreamed group. Each child in the study was observed for two forty-five minute sessions scheduled four months apart. A comparison was made between handicapped segregated children and handicapped mainstreamed children. According to Federlein, et al. (1982), the results of this study indicate that handicapped children in the mainstreamed group exhibited a greater frequency of mature play behaviors as evidenced by a lower incidence of onlooking and solitary play and higher ratings for parallel play and "total play complexity" (p. 251). Federlein, et al. (1982) conclude that proximity intervention by handicapped peers had a direct influence on the more favorable "level, complexity and initiator of play behavior" (p. 245) of the handicapped children in the mainstreamed setting.

Similarly, Beckman and Kohl (1987) considered effects of proximity intervention on the social interactions and play behavior of handicapped preschool youngsters. Six handicapped and six nonhandicapped children from both mainstreamed and segregated settings were observed during free play on four occasions over the course of the school year. A tape recording of each session was made. An analysis of the findings by Beckman and Kohl (1987) indicated that the handicapped children in the integrated setting made more progress in social skill development as a result of proximity intervention by nonhandicapped peers. In addition, according to these researchers, the handicapped children in the integrated setting exhibited a more complex level of play behavior than did the handicapped children who did not have the benefit of proximity intervention in a mainstreamed setting.

Strain and Odom (1986a) discuss peer initiation intervention, another aspect of peer-mediated instruction, in which socially advanced children are taught to direct overtures to socially disabled children, such as by giving them a toy or by suggesting an idea for a game. According to Odom and Strain (1985), the key factor in peer initiation intervention is that the socially advanced children must learn not to abandon their efforts to involve the socially deficient children in play, even though these children may not be responsive at first. In implementing this strategy, Odom and Strain (1985) suggest that teachers model targeted social behaviors for the peer

trainers, allow them time for practice and role playing with an adult trainer, and positively reinforce their efforts. During role playing, the adult trainer should exhibit behaviors that the handicapped child might typically be expected to present during actual play sessions. In this way, the peer trainer will be prepared for possible inattentiveness and rejection by the socially disabled children (Odom & Strain, 1985). Initially, Odom and Strain (1985) suggest that peer trainers be taught to present a variety of social overtures, including share gestures, offers of assistance, affection, and verbal play organizer strategies. Later, the peer trainers should be encouraged to initiate only those behaviors which prove to be most successful in motivating responses from the socially disabled children (Odom & Strain, 1985). In addition, once it becomes apparent that specific toys or activities are most useful, adaptations should be made in materials and methodology (Odom & Strain, 1985). In assessing the effectiveness of peer initiation intervention, Odom and Strain (1985) have determined that it has proven to be at least as effective as teacher-mediated intervention in facilitating social skill development, that its benefits are likely to generalize across settings and over time, that peer trainers seem to experience no harmful effects as a consequence of having taken part in this type of behavior modification program, and that success has been achieved with various types of handicapped children, including mentally retarded and autistic children.

A study by Goldstein and Wickstrom (1986) provides evidence which supports peer initiation intervention. Two preschool-aged children with handicaps and three without handicaps participated in this study. The handicapped children had behavioral disorders, were developmentally-delayed, and presented autistic symptoms. Using a carefully-planned training procedure, teachers taught the two nonhandicapped preschoolers specific social initiation strategies designed to improve the social skill development of the three handicapped youngsters. These strategies consisted of "(a) establishing eye contact, (b) establishing joint focus of attention, (c) describing one's own play and the play of others, (d) prompting requests through a sequence of steps, (e) responding to the speech of others by repeating, expanding, or requesting clarification, and (f) redirecting play activity" (Goldstein & Wickstrom, 1986, p. 211). The following is a description of the instructional method used by the teachers to train the nonhandicapped children:

> The strategies were introduced one at a time using a direct instruction approach. Following a brief introduction and verbal rehearsal according to a prepared script, each child practiced using the strategies with an adult "actor." The actor made it progressively more difficult to evoke appropriate responses by initially ignoring the peers and by delaying responses for longer periods of time.
>
> A set of posters illustrating each of the six

> strategies was used in training and was used to prompt use of the strategies. (Goldstein & Wickstrom, 1986, p. 211)

As a result of this strategy, Goldstein and Wickstrom (1986) determined that, for each of the handicapped children, there was an increase in the rate of social interaction, especially with respect to a marked improvement in the number of responses to the social overtures of the peer trainers. When compared to baseline levels, there was also evidence of a decrease in the number of antisocial remarks by the handicapped children (Goldstein & Wickstrom, 1986). Of particular significance, however, are the conclusions by these researchers that this peer initiation intervention strategy succeeded in effecting an improvement in the generalization of skills to other settings and in the preservation of social interactions above baseline levels even after teacher prompts were eliminated.

These findings by Goldstein and Wickstrom (1986) were reaffirmed by Goldstein and Ferrell (1987) in a later study which was based on a similar experimental design, targeted social initiation skills, and training procedure. This study involved three handicapped children with behavioral, social, and communicative disorders and six socially advanced children. As a result of peer initiation intervention, Goldstein and Ferrell (1987) found that there were substantial increases in the social interaction and response rates of the handicapped children. They also concluded that there was generalization

of social skills to other settings.

A noteworthy attribute exhibited by nonhandicapped youngsters involved in peer-initiation intervention is their ability to adapt their initiations and interactions to accomodate the developmental level of their handicapped classmates. Strain (1984b) states that nonhandicapped children will typically persevere in their efforts to communicate with their developmentally-delayed classmates. Similarly, Guralnick (1981) and Blacher-Dixon, Leonard, & Turnbull (1981) have found that socially advanced children readily adjust the complexity of their message to the comprehension level of their audience, especially in cases involving children who are mildly, moderately, or severely handicapped.

An issue which has received some attention in literature dealing with peer-mediated instruction in a mainstreamed setting relates to the impact which social integration has for the nonhandicapped child. For example, Odom, Deklyen, and Jenkins (1984) conducted a study to evaluate the consequences of placing preschoolers in classes consisting largely of handicapped children. An experimental group of sixteen nonhandicapped children were placed at random in four integrated preschool classes. For purposes of comparison, a control group of sixteen nonhandicapped children, matched for sex and age with the children in the experimental group, were enrolled in three classes which consisted only of nonhandicapped children. Various assessment procedures were applied to the children in both the

experimental and control groups at the beginning and end of the school year. Odom, et al. (1984) indicated that these assessment procedures revealed no substantial differences in the performance of either of the two groups. Moreover, they determined that the assignment of nonhandicapped children to integrated preschool classes consisting mainly of handicapped children does not seem to impede the rate of development of the nonhandicapped children. Similarly, Strain and Odom (1986) found that not only did peer initiation intervention generate favorable increases in the social responses, social overtures, and length and quality of interactions of handicapped children, but also that there were no detrimental consequences for the nonhandicapped children as a result of having participated in peer-mediated instruction.

Current educational research contains an overwhelming amount of evidence in support of preschool mainstreaming. The many excellent textbooks and articles on the subject present a strong rationale for a carefully structured and well-organized program of social integration at the preschool level. However, a judicious and objective review of the literature does reveal some components of experimental design which require improvement and several aspects of the topic in which research is lacking.

With respect to limitations in experimental design, many of the studies dealing with preschool mainstreaming include very small subject samples. This factor makes it difficult to apply results to other preschool children and to other

settings or to use results to predict and evaluate effects over time. Moreover, because of the very nature of the subject of preschool mainstreaming and because of the many factors which may contribute to its effectiveness, it is often quite difficult to achieve satisfactory control of all of the relevant variables in a given study. For example, Strain (1984a) admits that results of experiments are "limited by the many uncontrolled contextual variables in the research setting" (p. 26), and Burstein (1986) advises that educators systematically assess the effects of the many environmental factors. Raab, et al. (1986) cite the "inconsistency of human observers" (p. 279) as a problem of research. Another limitation of current research on the subject of preschool mainstreaming involves setting. Guralnick (1981) asserts that there should be a "focus on intensive direct observations of children in naturalistic educational settings" (p. 129). However, many studies have been conducted in model, university-affiliated environments, rather than in naturalistic settings. Furthermore, with respect to evaluation of behavior, Strain and Cordisco (1983) explain that there is need for improvement in the validity and reliability of assessment instruments and strategies. Moreover, Strain and Kohler (in press) add that researchers must enlarge their "repertoire of observational and social validation measures." Finally, Dunlop, et al. (1980) advise an evaluation process which involves a combination of sociometric techniques and systematic observation in a naturalistic setting.

Educators acknowledge that there are several aspects of preschool mainstreaming which have not been studied in depth and which, therefore, require additional research. For example, while there is an abundance of information about the effects of mainstreaming on social skills development, there are very few studies which assess its effects on cognitive skill development. Indeed, Edminster (1987) urges that researchers consider "the effects of integration of handicapped and nonhandicapped children in developmental skill areas other than social interaction" (p. 135).

Moreover, there is a need for more research to evaluate the effects of mainstreaming with respect to each of the unique handicapping conditions which have been targeted for intervention by special educators. In current educational research, there is the tendency to treat the population of handicapped children as an entity rather than to consider the differential effects of a mainstreamed environment on individuals with specific types of disabilities.

Similarly, there is a need for additional research to assess the long-term effects of mainstreaming on nonhandicapped children children. Raab, et al. (1986) explain that the concerns of many parents of nonhandicapped children who are part of mainstreamed programs are not reflected in the literature on the subject. Strain and Cordisco (1983) also state that long-range effects on the attitudes and behaviors of nonhandicapped children involved in peer-mediated intervention

programs is a topic that warrants further study and evaluation.

Finally, more research is needed to ascertain whether the benefits of mainstreamed programs actually generalize to young children in different settings and over time. Indeed, according to Peck, et al. (1978), "the most rigorous test of any behavior modification program is whether behavioral gains established in training sessions generalize to environments where they are not directly reinforced" (p. 206). Nevertheless, Strain and Kohler (in press) assert that there are comparatively few studies which demonstrate with any degree of certainty that newly-acquired social skills are preserved over time or generalize across diverse settings. Moreover, it is most expedient that many more follow-up studies be conducted to determine whether participation in a mainstreamed preschool program has a significant positive correlation with successful transition to and favorable social adjustment in kindergarten and first grade.

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